

ABSTRACT OF THE DISCLOSURE

A system includes a microprocessor and an integrated circuit, which has interface, logic, and storage circuits for accelerating database search functions. The storage circuit includes table memory and operational plane memory, each location of which may be simultaneously coupled in parallel to a unique location in table memory. A method includes the steps of inputting unsorted entries and performing a first hash function, which sorts the entries into tables. The method also includes storing the sorted tables in table memory, inputting a search key, and performing a second hash function on the search key. The second hash function outputs a table identifier representing the table in which the search key will likely be found. The method further includes simultaneously transferring the table represented by the table identifier in parallel from table memory to operational plane memory and performing a search function on that table using the search key.

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